

**Today is  
special Day**

**16 years in  
Technology**



# Superpower with Nx

For your workspace

Santosh Yadav

# About me

Senior Engineer  
Celonis

GDE

GitHub Star

Nx Champion

Co-founder This  
is Learning

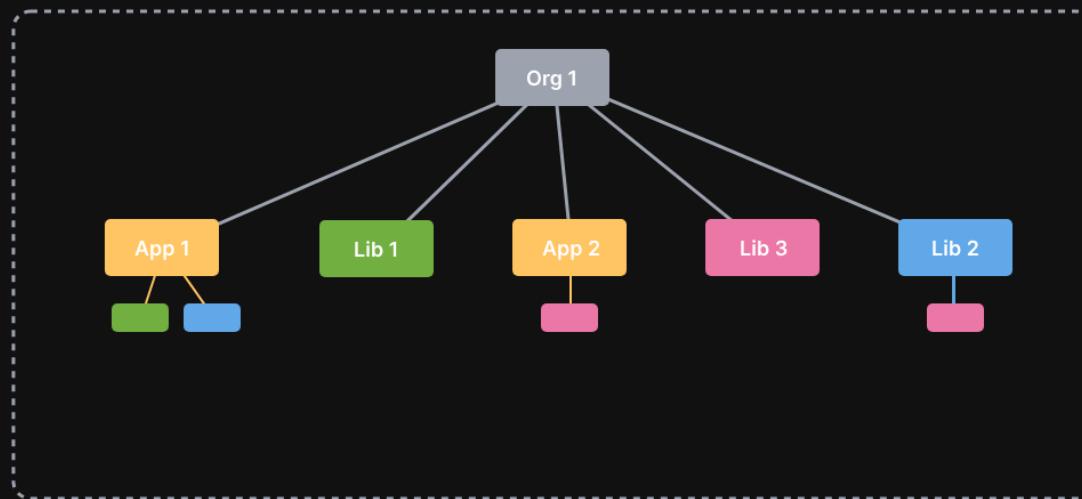
Co-host This is  
Tech Talks

# What is Nx

A build tool with mono-repo support

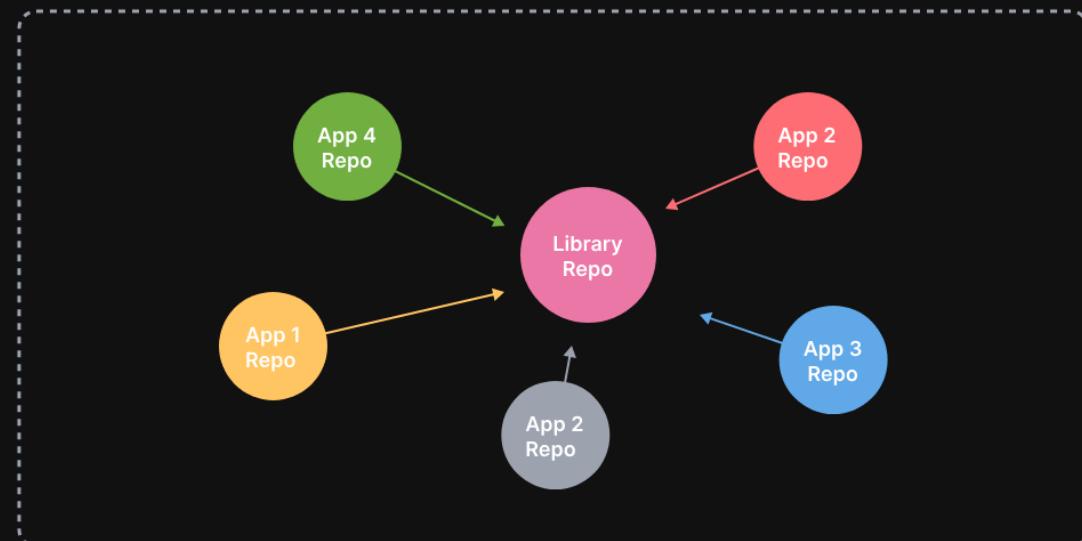
- <https://monorepo.tools/>

## Monorepo



## Polyrepo

<https://monorepo.tools/>



- Provides build cache for tasks like build, test
- Framework and technology agnostic
- Plugin based so you can bring your own tool
- Support major frameworks like Angular, React and Vue out of the box
- Support for micro-frontend
- Support for backend technologies like spring and .net core

# New Worspace

Creating a new workspace  
with mono-repo support

A vibrant, abstract background resembling liquid paint swirling in water, with colors including orange, yellow, blue, green, and purple.

npx create-nx-workspace

~

**npx create-nx-workspace**

**NX** Let's create a new workspace [<https://nx.dev/getting-started/intro>]

✓ Where would you like to create your workspace? · react-india

✓ Which stack do you want to use? · react

? What framework would you like to use? ...

None I only want react and react-dom

Next.js [ <https://nextjs.org/> ]

Remix [ <https://remix.run/> ]

Expo [ <https://expo.io/> ]

React Native [ <https://reactnative.dev/> ]

**NX** Let's create a new workspace [<https://nx.dev/getting-started/intro>]

✓ Where would you like to create your workspace? · react-india

✓ Which stack do you want to use? · none

? Package-based monorepo, integrated monorepo, or standalone project? ...

Package-based Monorepo: Nx makes it fast, but lets you run things your way.

Integrated Monorepo: Nx creates a monorepo that contains multiple projects.

Standalone: Nx creates a single project and makes it fast.

**NX** Let's create a new workspace [<https://nx.dev/getting-started/intro>]

- ✓ Where would you like to create your workspace? · react-india
- ✓ Which stack do you want to use? · none
- ✓ Package-based monorepo, integrated monorepo, or standalone project? · integrated
- ? Which CI provider would you like to use? ...

GitHub Actions

Circle CI

Gitlab

Azure DevOps

BitBucket Pipelines

# Adding Support for React frameworks

Adding Support for React frameworks to mono-repo

```
1 nx add @nx/remix  
--add Remix  
support  
2  
3 nx add @nx/next  
--add Next  
Support  
4  
5 nx add  
@nx/react-native  
-- Add react  
native support
```

# Adding A new App

Adding a new App for choice of your framework

- 1 nx add @nx/remix:application --name=<remix-app> --add Remix App
- 2
- 3 nx add @nx/next:application --name=<next-app> --add Next App
- 4
- 5 nx add @nx/react-native:application --name=<react-native-app> --add react native App

# Creating Libraries

Creating a new library for better code splitting

```
1 nx g @nx/next:lib  
--create a new  
next library  
2  
3 nx g  
@nx/remix:lib ---  
create a new  
remix library  
4  
5 nx g @nx/react-  
native:lib ---  
create a new  
react native  
library
```



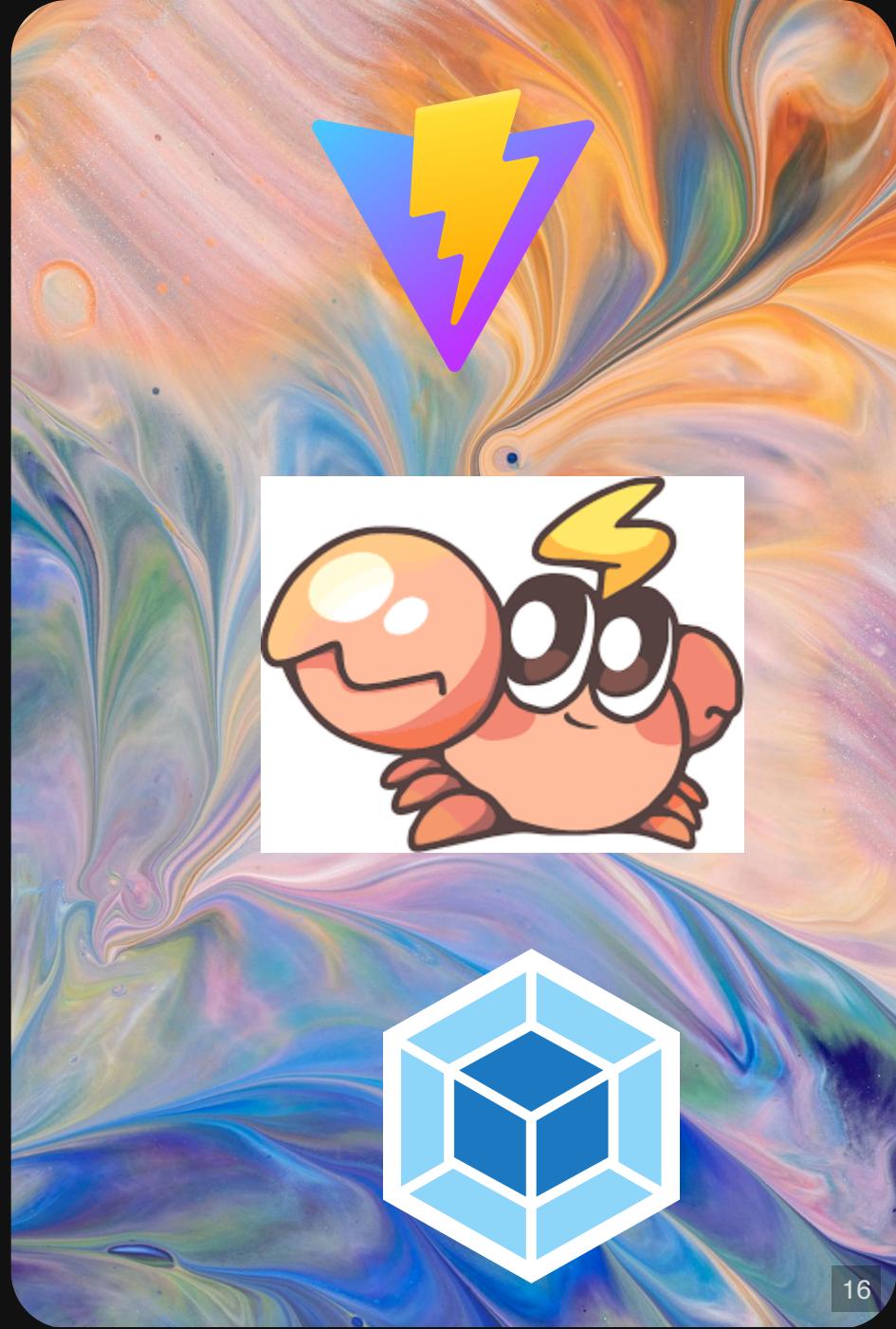
**HER: HE IS PROBABLY THINKING ABOUT OTHER GIRLS**



**SHOULD I EJECT MY WEBPACK CONFIG AS  
CREATE-REACT-APP IS NO LONGER MAINTAINED**

# Tooling of your choice

Chose modern tooling for  
your apps and libs



# First-class support for e2e framework

Chose e2e framework of  
your choice



# Build plugins

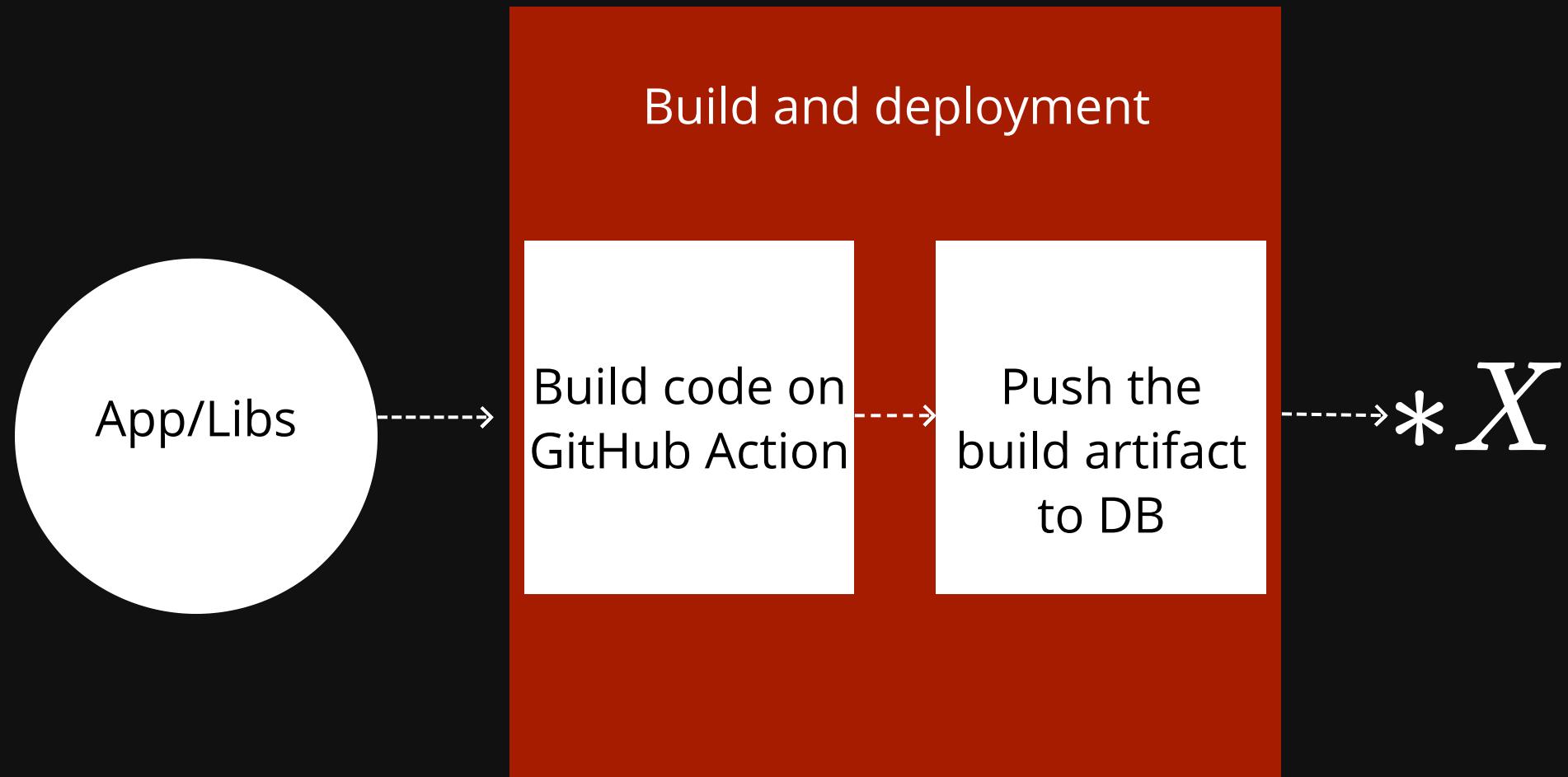
Bring your own tool or  
override existing behavior

```
1 nx add @nx/plugin
2
3 nx g
@nx/plugin:plugin
4 nx-plugin
5 --directory
libs/tools/react-
overrides
```

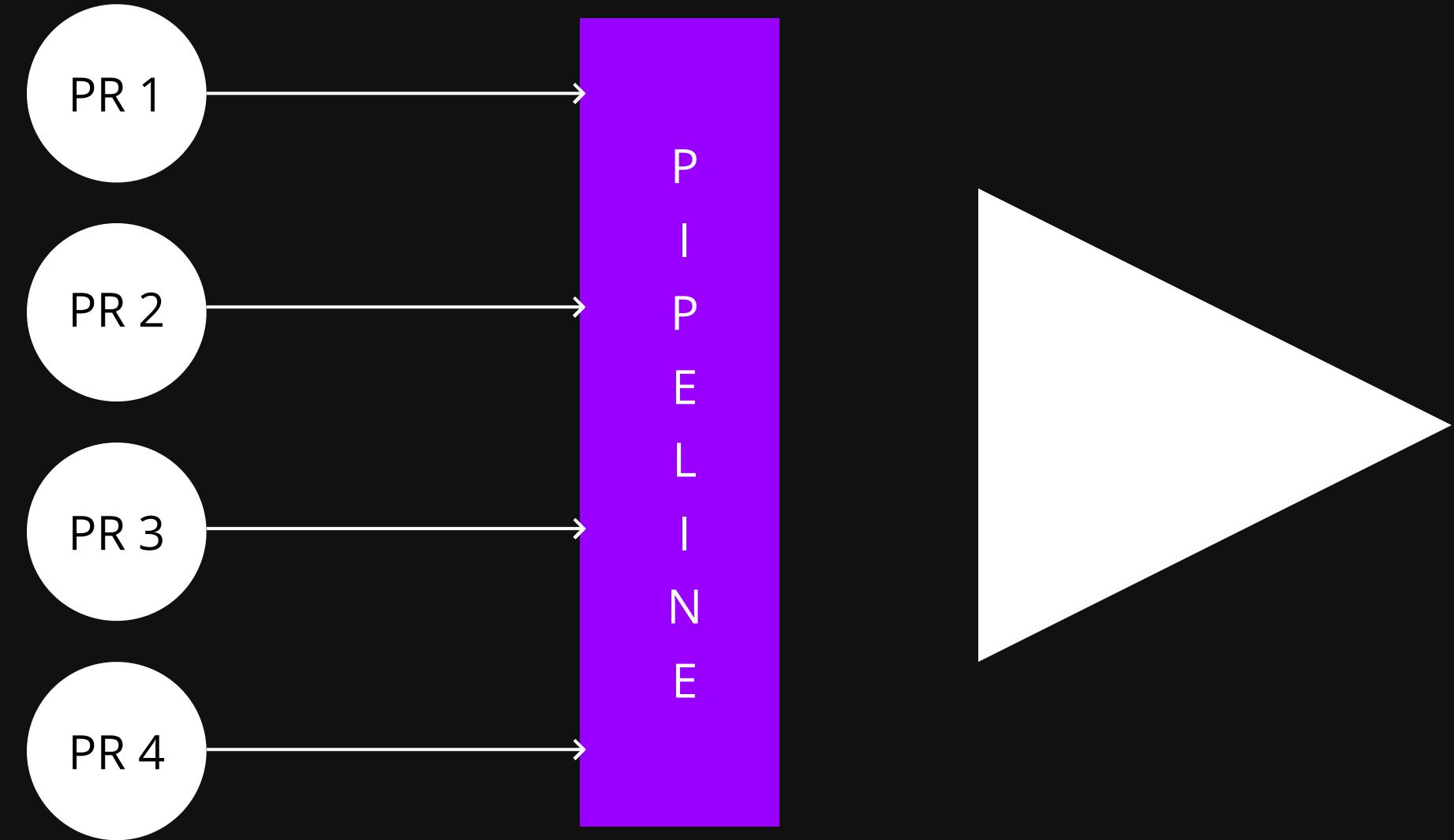
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*The ultimate goal for all developers to write code and wait for your builds to complete on CI*

# Build and Deployment workflow for each App

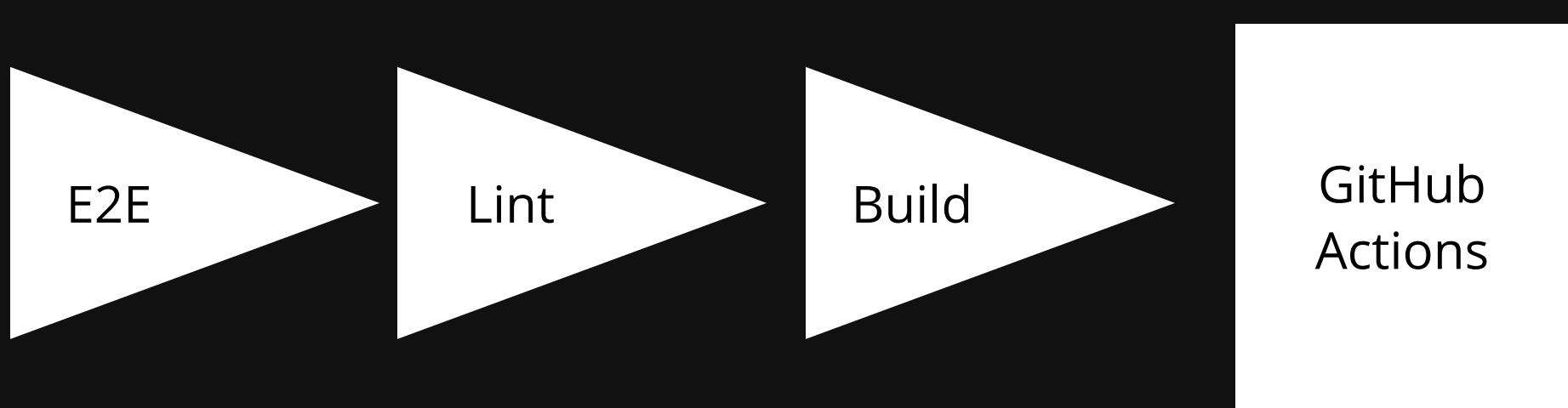


X = number of Apps



PR = Pull Request

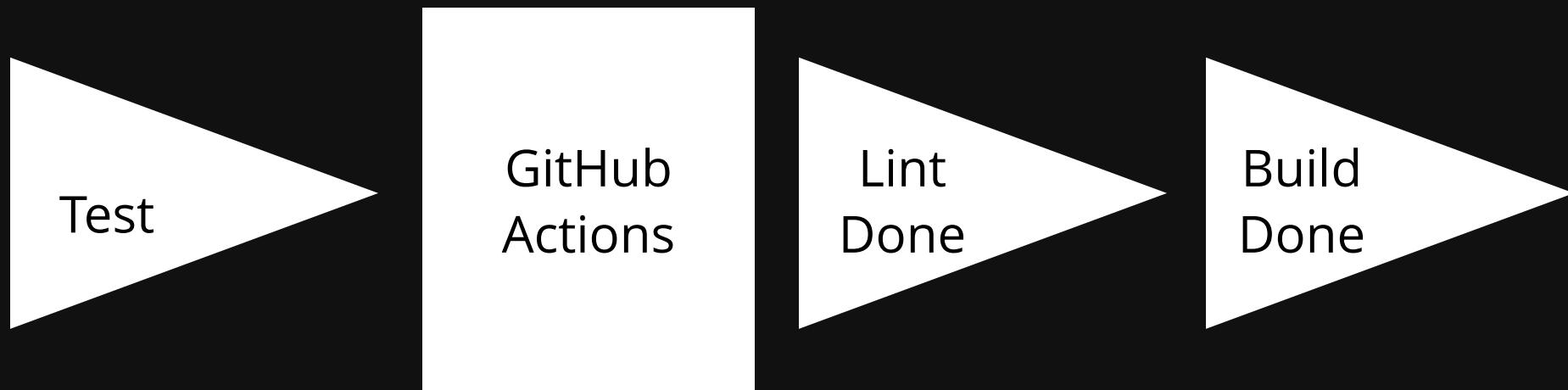
# Build workflow on CI



# Build workflow on CI



# Build workflow on CI

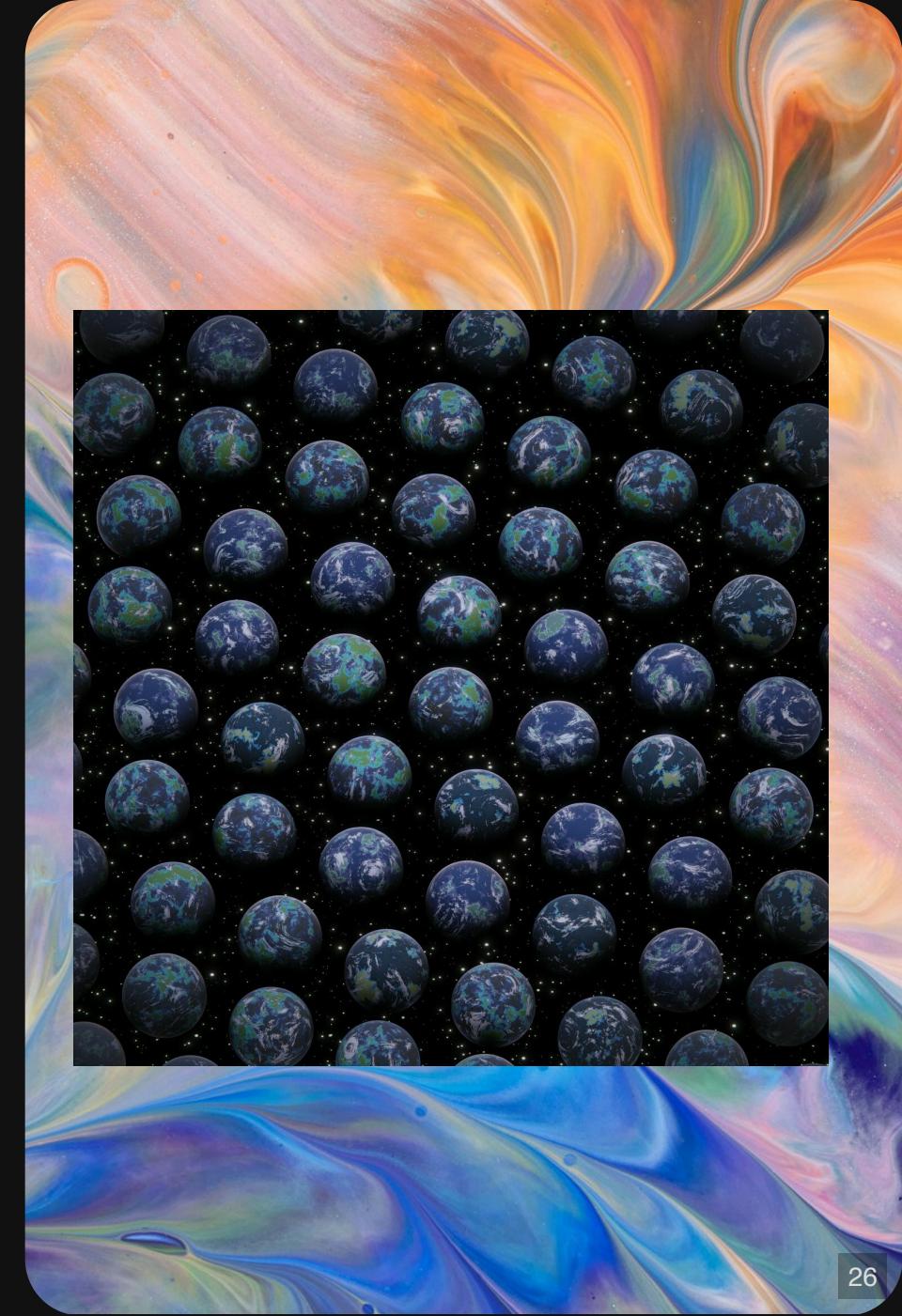


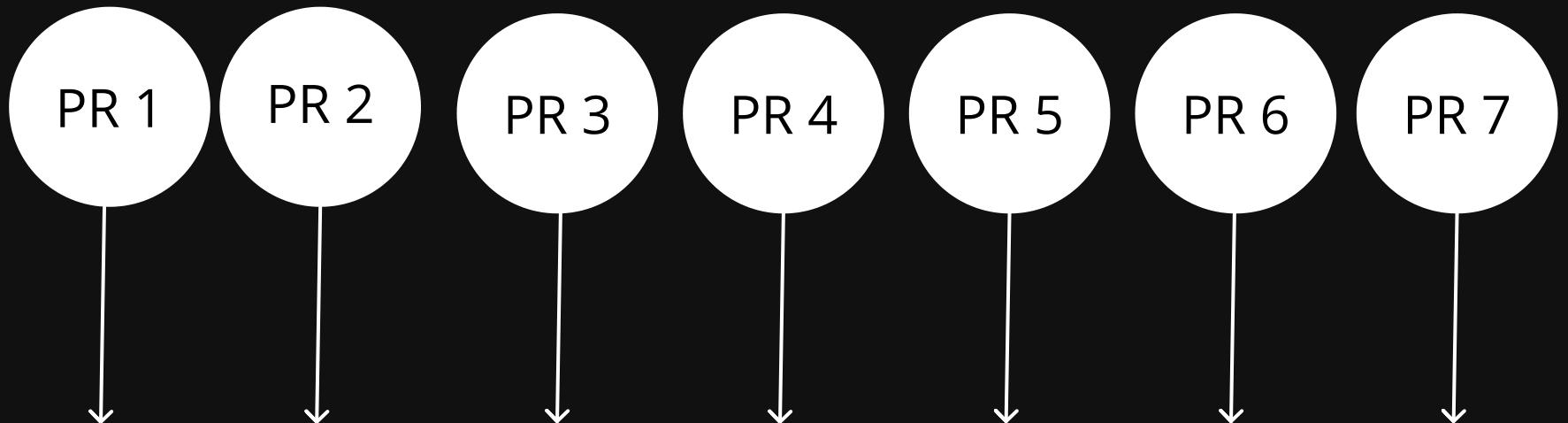


Bernie

**I am once again asking  
for faster builds and tests**

# Long build times a multiverse story





Pipeline

PR = Pull Request

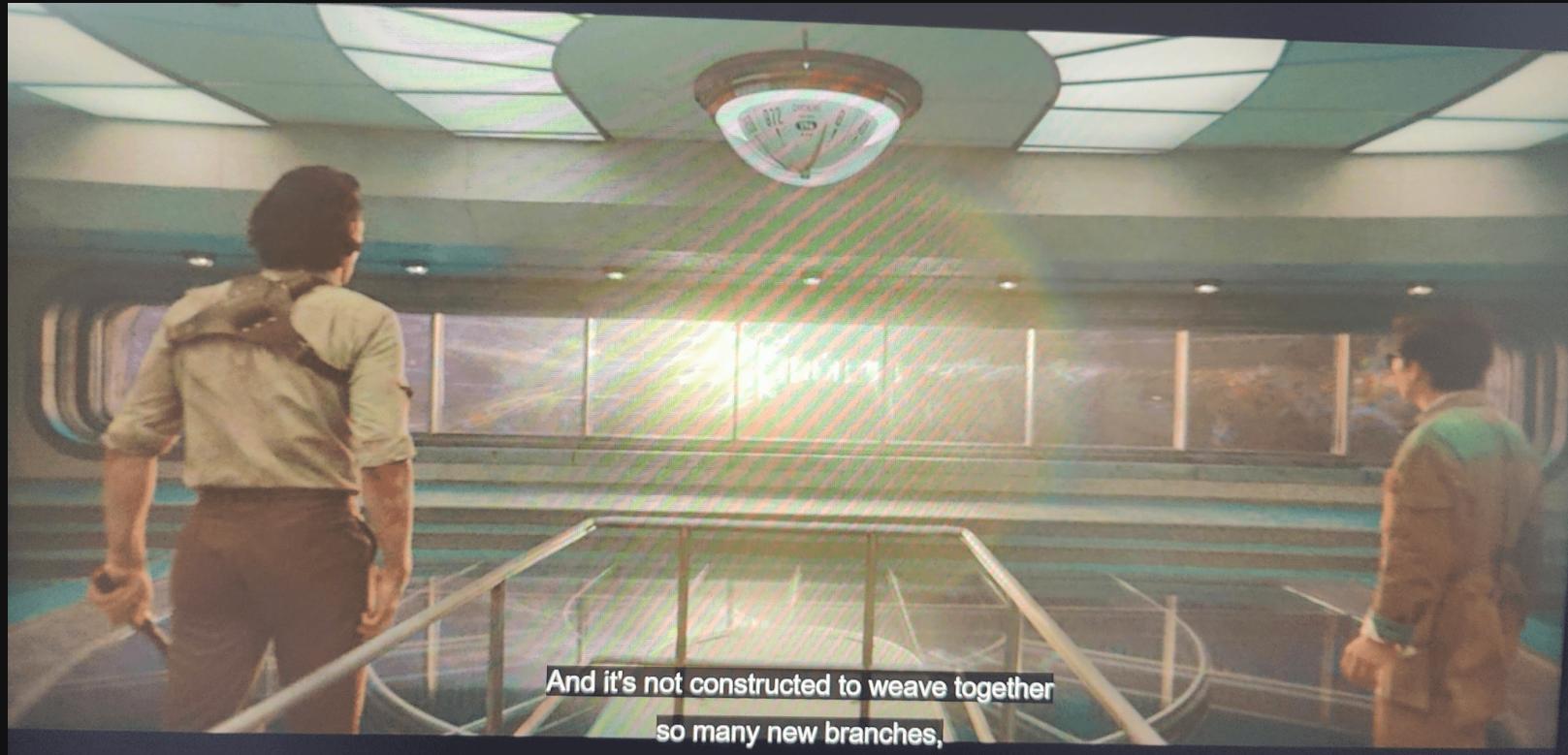


LOKI  
SEASON 2



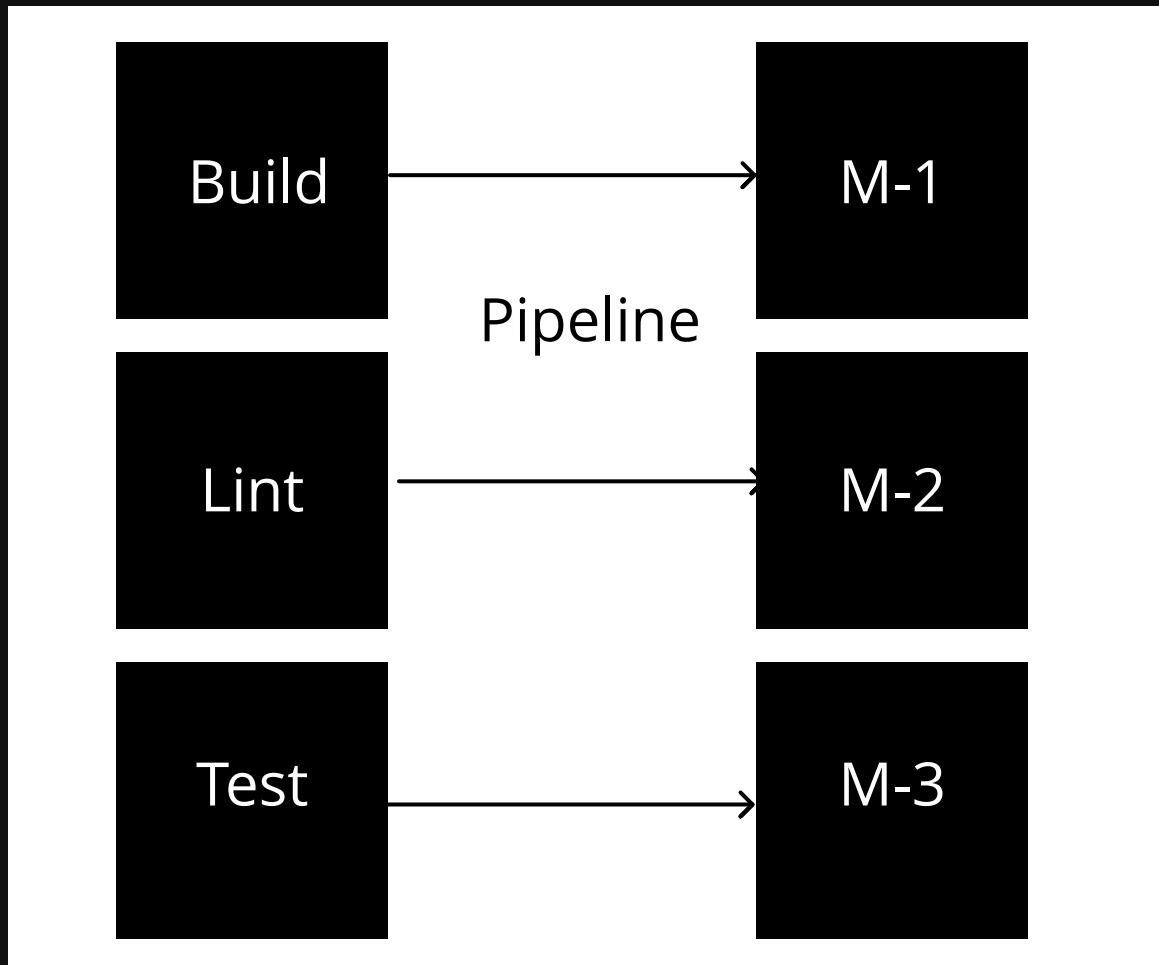


*Give him more time!*

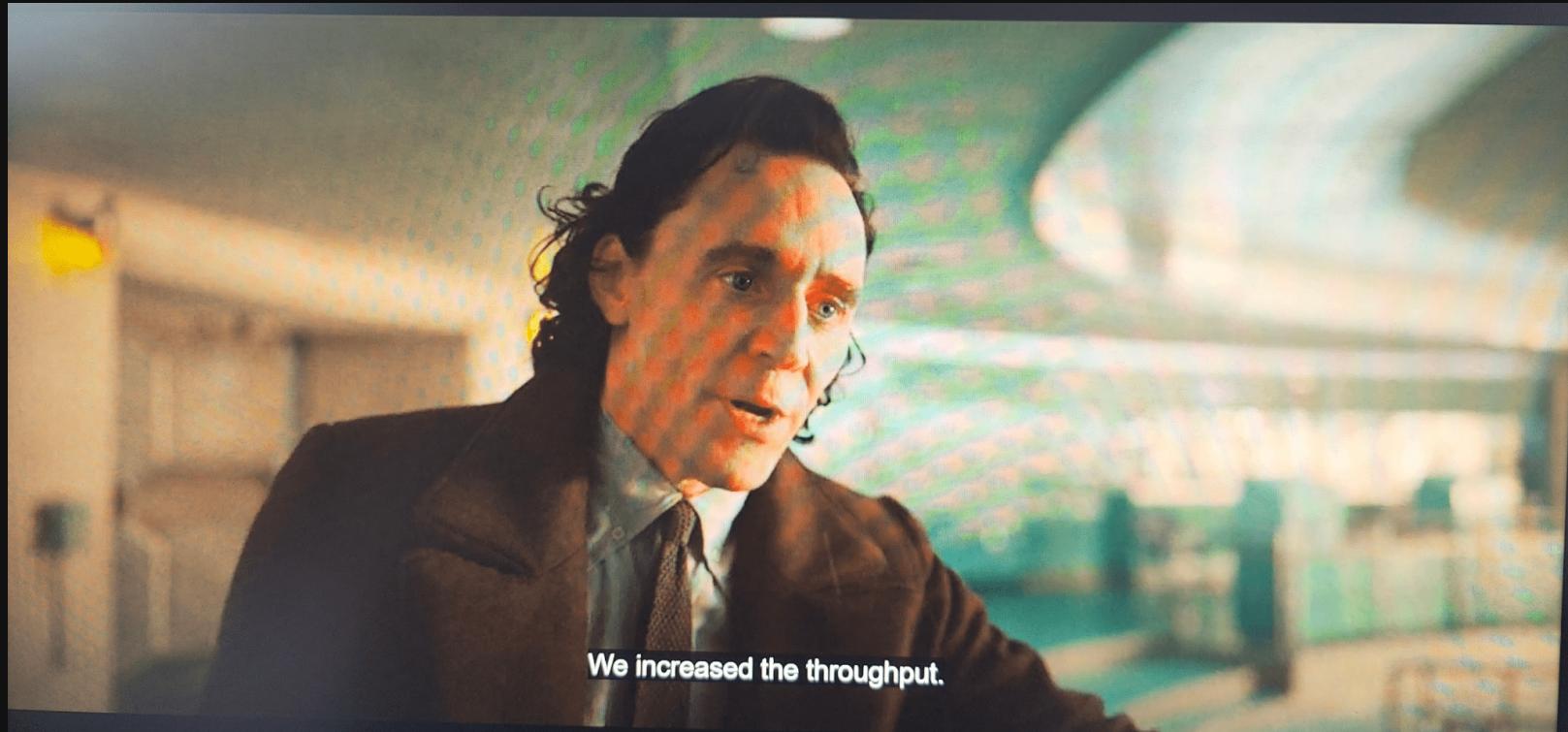




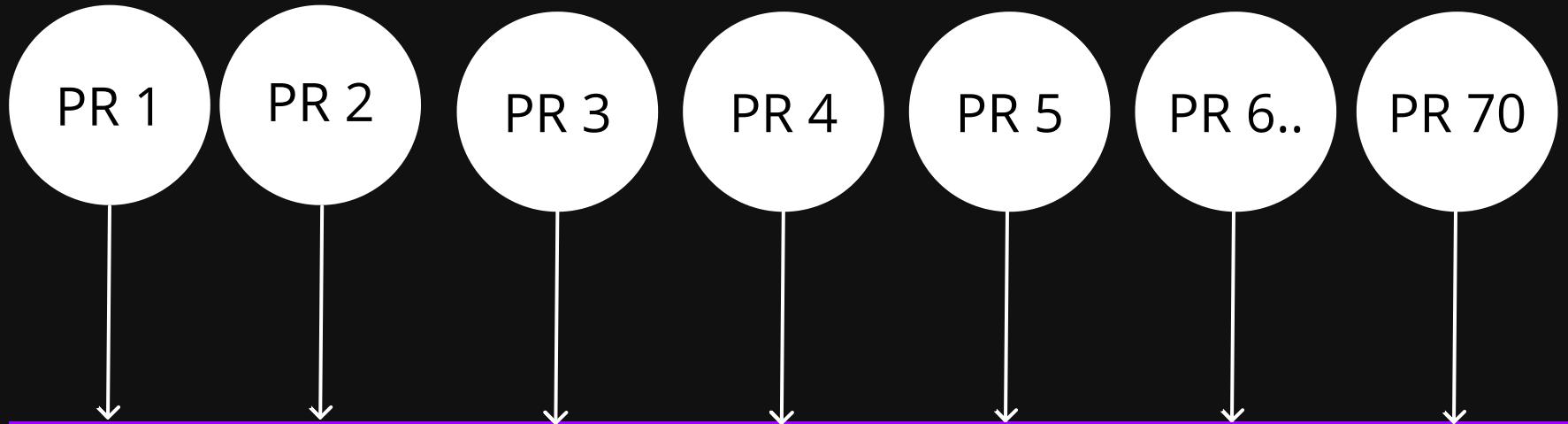
# Parallel builds using GitHub Actions using Matrix and large runners



M = Machine (can be linux/windows/mac)

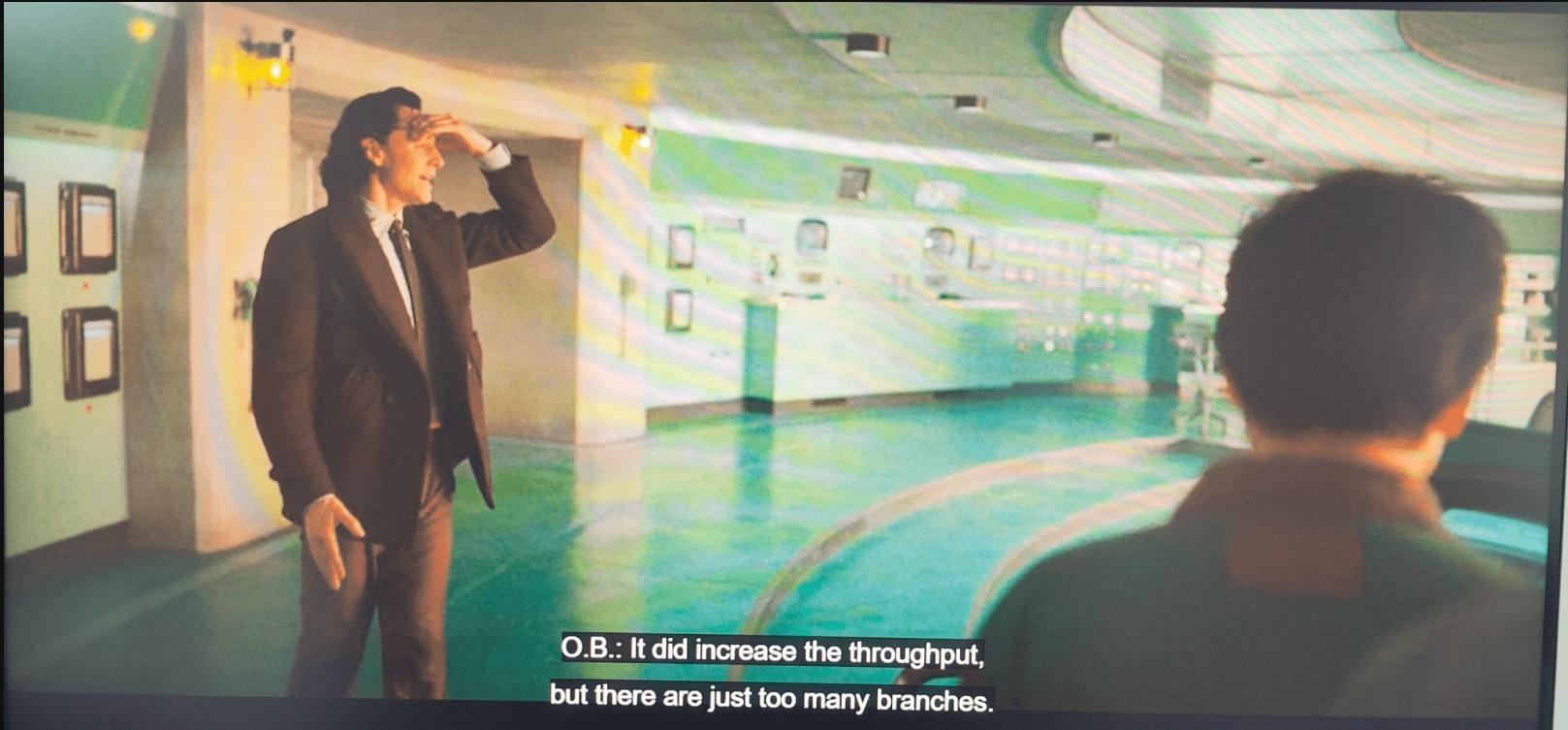


We increased the throughput.

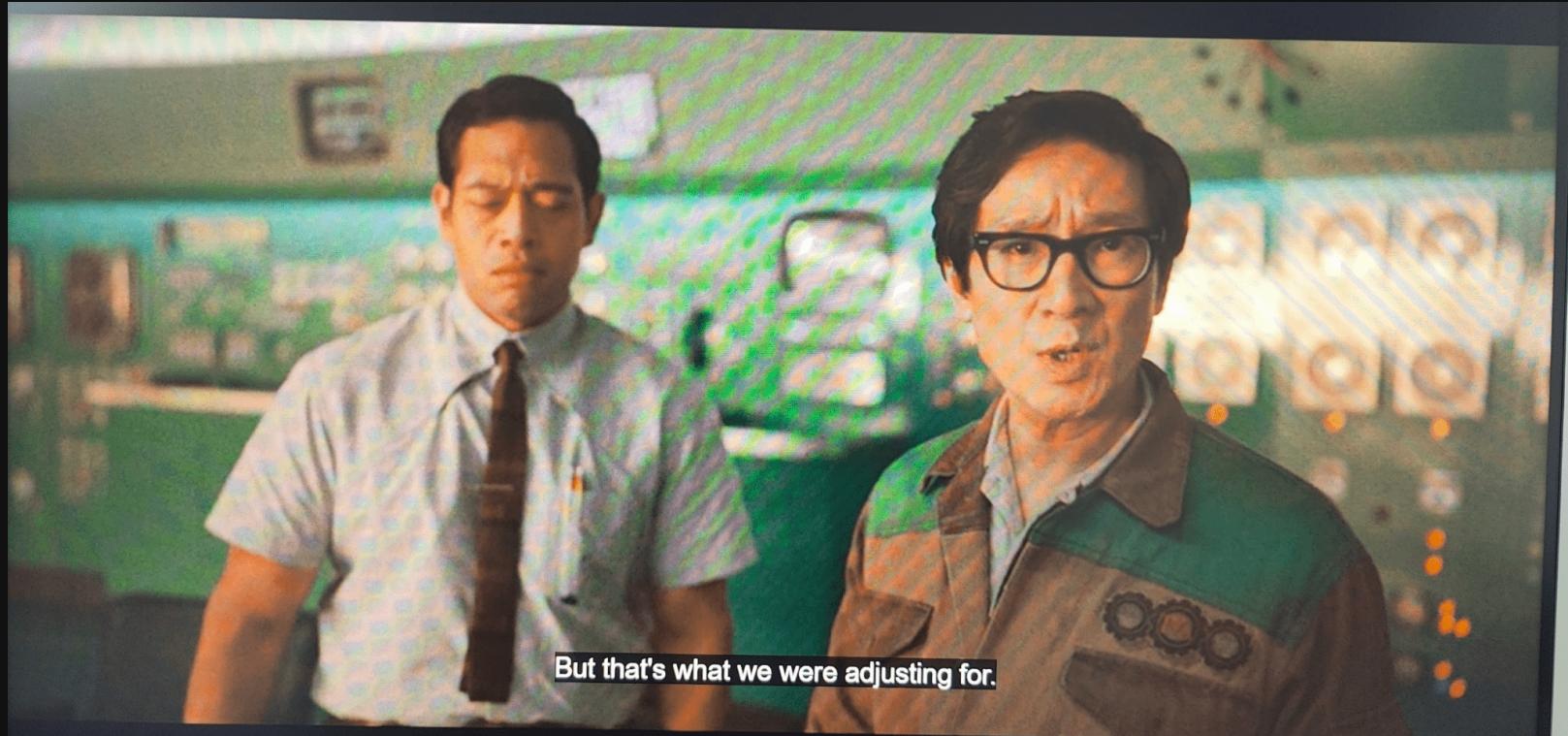


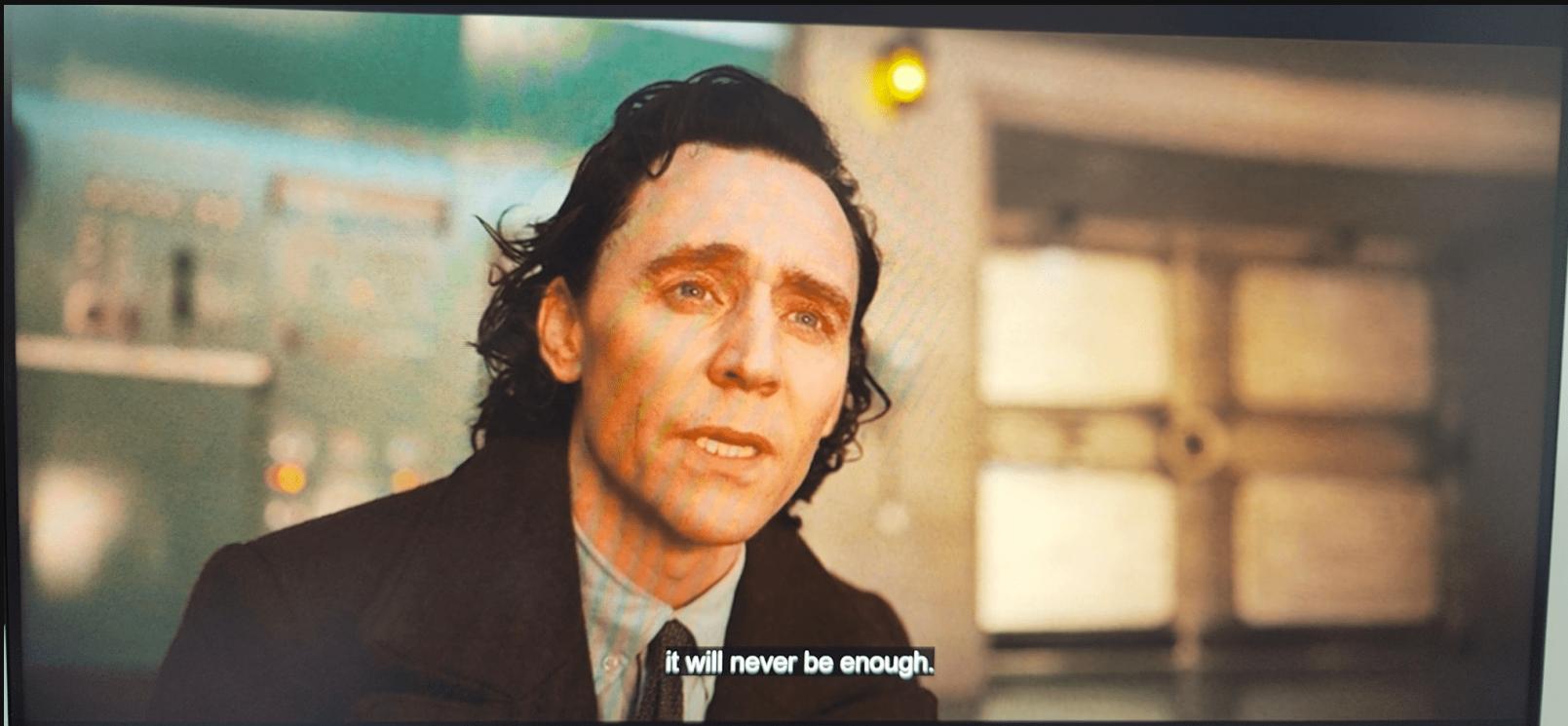
Pipeline

PR = Pull Request

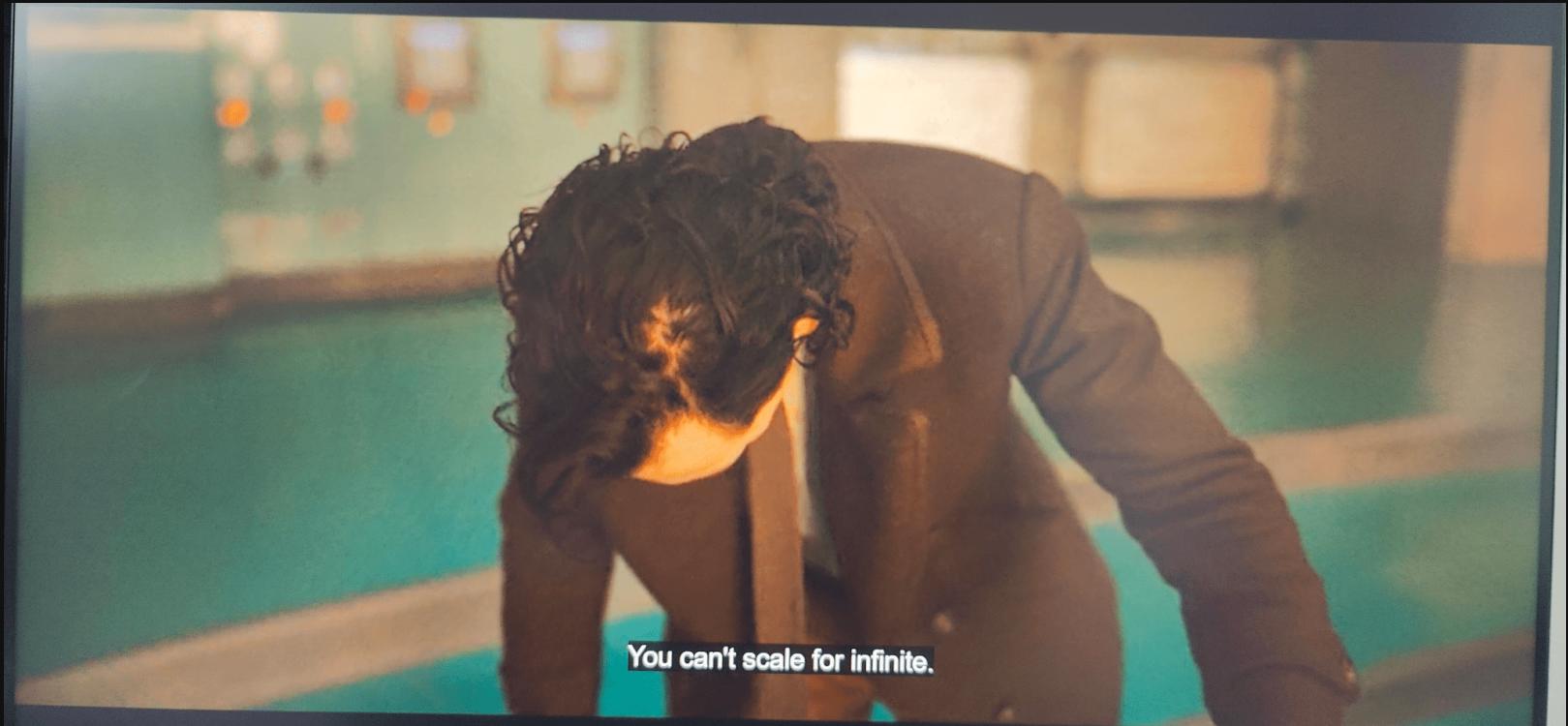


O.B.: It did increase the throughput,  
but there are just too many branches.





it will never be enough.



You can't scale for infinite.

”

**One problem we have with build tools is that we build the same code repeatedly, though we don't change it.**



imgflip.com



# Build what you changed

Nx is smart to identify  
what Apps/libs are  
affected by your change

`nx graph`



Projects ▾



① Analyse and visualize your workspace.

lib name, other lib name

 Include related libraries

Show libraries that are related to your search.

 Show all projects Hide all projects Group by folder

Visually arrange libraries by folders.

 Activate proximity

Explore connected libraries step by step.

- 1 +

app projects

hello-react

e2e projects

hello-react-e2e

lib projects

awesome-lib

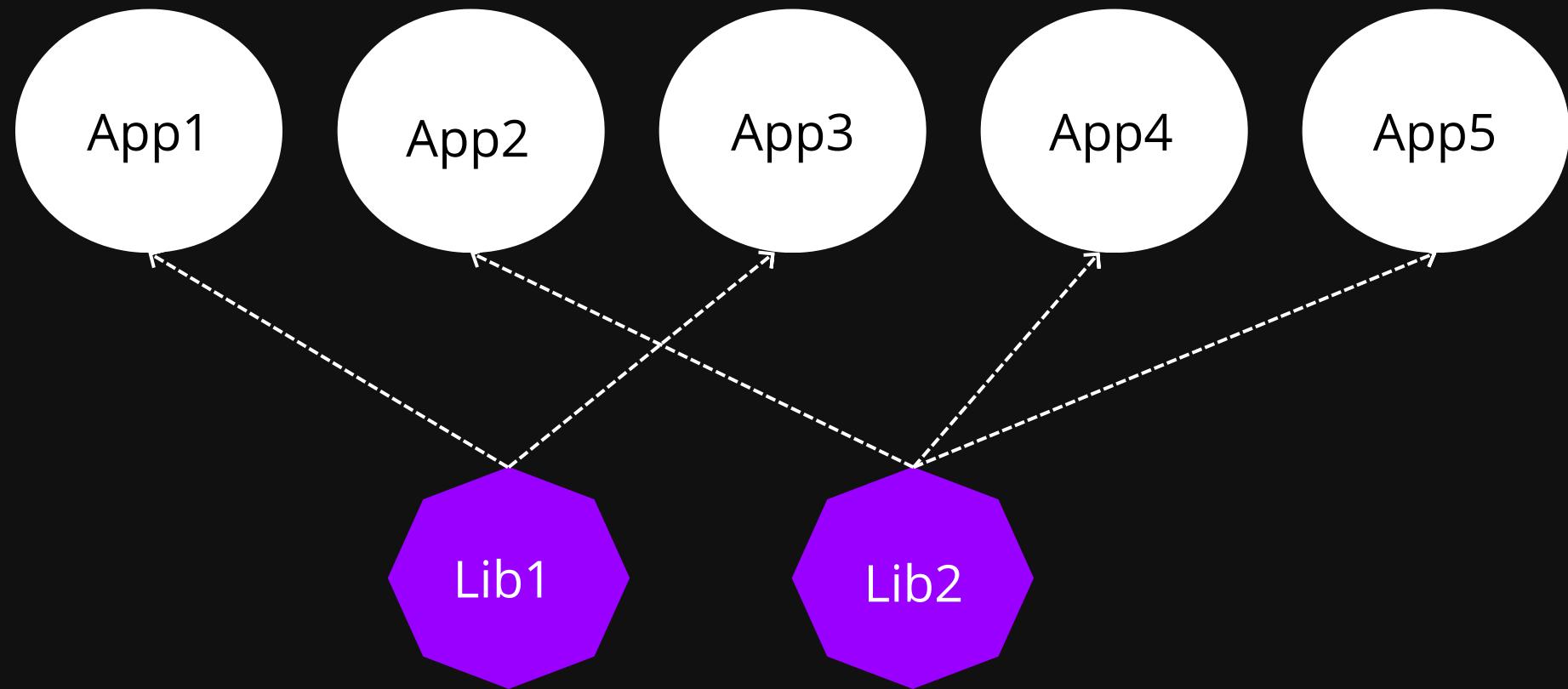
hello-react-e2e

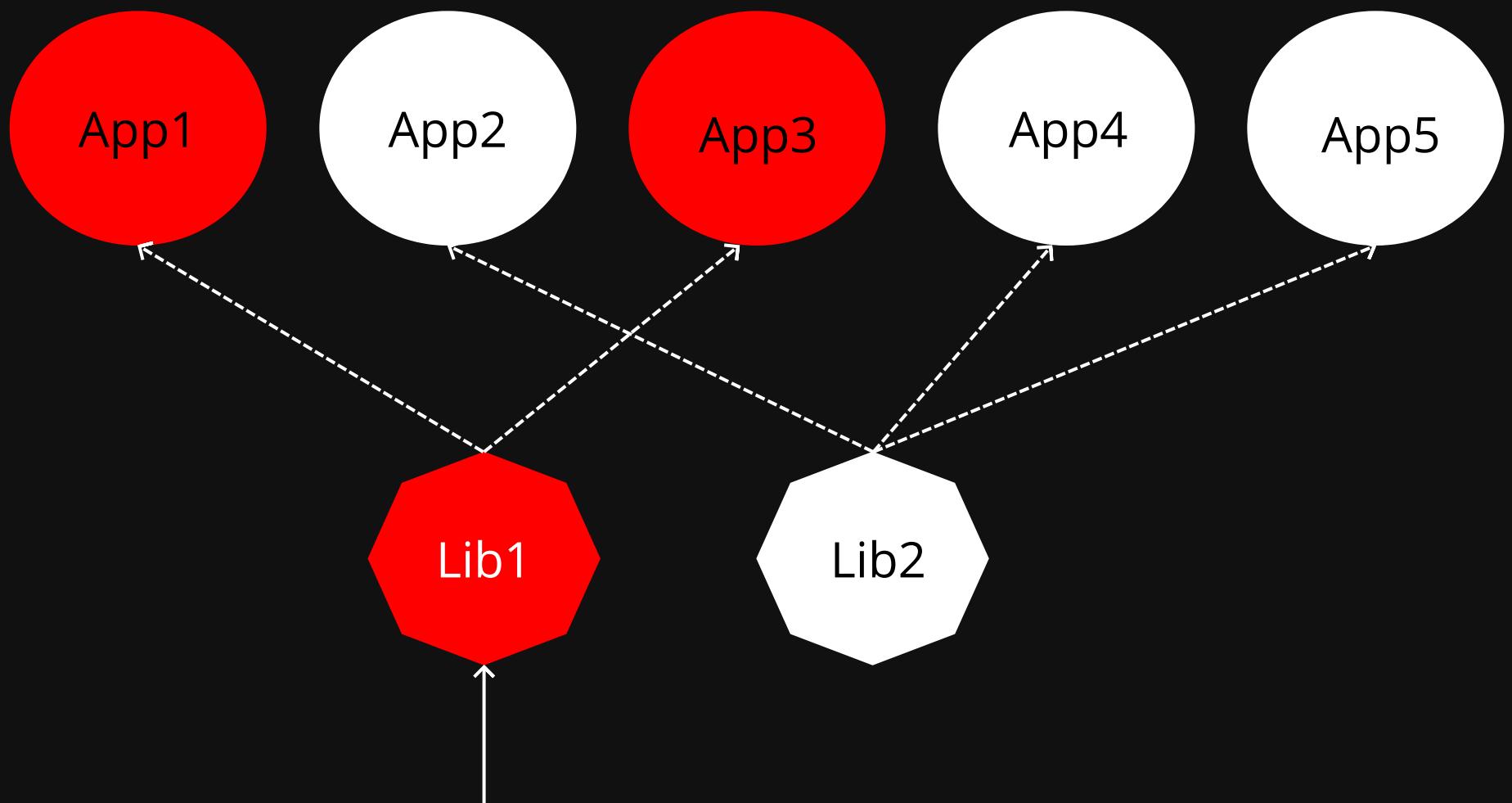
react-overrides

hello-react

← libraries







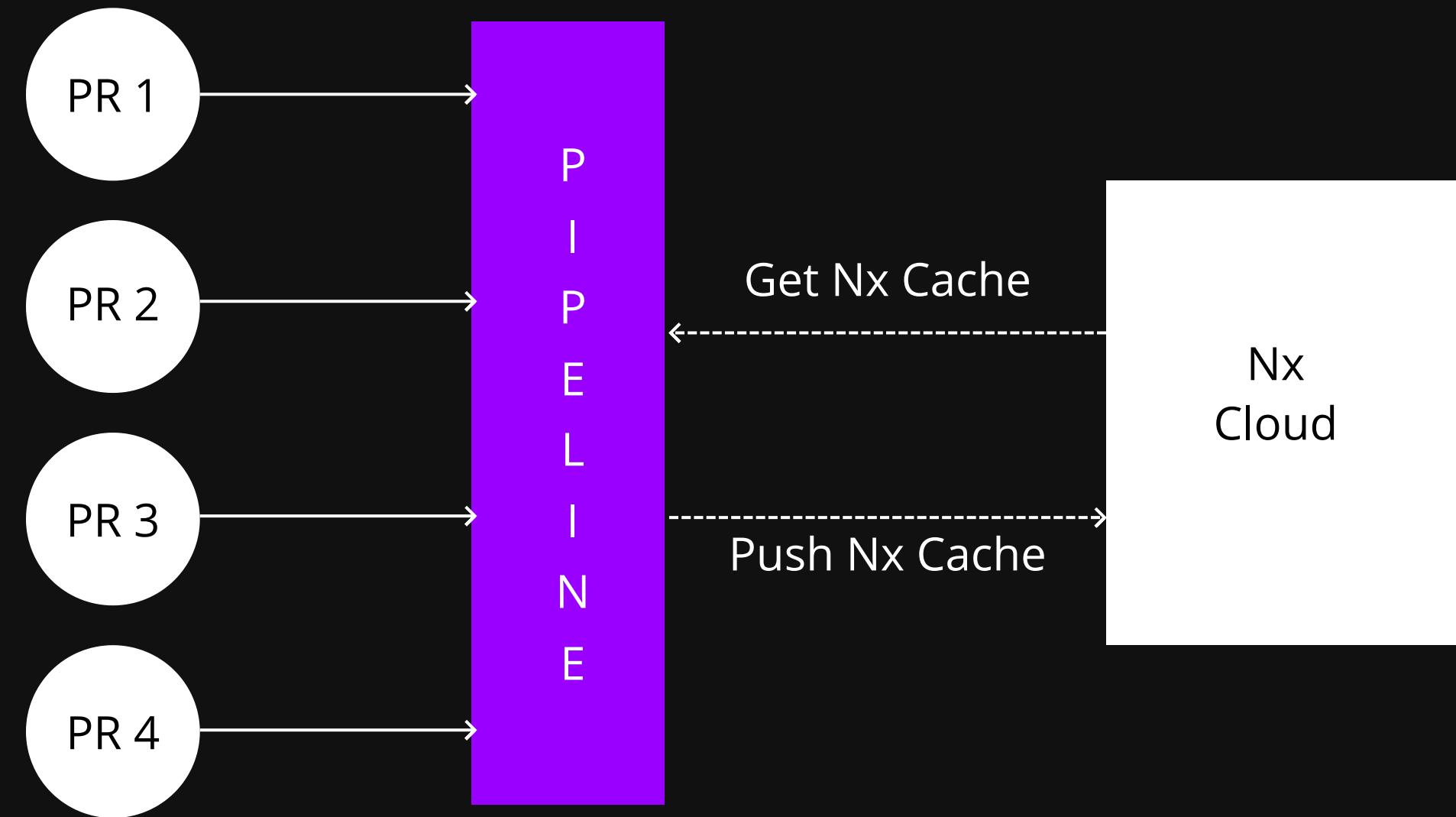
```
1 function newFeature() {  
2     return true;  
3 }
```

Changes in your Pull  
Request

# Build affected code

Run only affected tasks

```
nx affected --  
targets=build,lint,  
test
```



PR = Pull Request

# Publish libraries

Create a new  
npm/yarn workspace

# Publish libraries

Add Tooling of your choice

- Vite
- Webpack
- RsPack

# **Publish libraries**

Add configuration to  
bundle your  
dependencies and  
style

# Publish libraries

Add scripts to publish

- Add semver
- Add script to build package
- commit code and generate the changelog



# Publish libraries

Keep your library up  
to date with latest  
release of framework



# Publish libraries

Zero setup required to  
publish libraries

A vibrant, abstract background resembling liquid marble or paint swirling. It features a complex pattern of orange, yellow, blue, green, and white. A solid black rectangular overlay covers the middle portion of the slide, containing the text.

nx release

# Keep your tooling up to date

Be ahead with latest  
version of tools you use

A vibrant, abstract background resembling liquid marble or paint swirling. It features a complex pattern of orange, yellow, blue, green, and white. A solid black rectangular box is positioned in the center, containing the text.

nx migrate latest

# Thanks!

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Contact me on  
@SantoshYadavDev

